## ISSUE SLIP STAPLE AREA (for additional cross references)

| POSITION                  | INITIALS | ID NO. | DATE         |
|---------------------------|----------|--------|--------------|
| FEE DETERMINATION         | 7        |        | 011 - 10     |
| O.I.P.E. CLASSIFIER       |          | 7      | 04/27/9      |
| FORMALITY REVIEW          | da       | 720    | ob-19-01     |
| RESPONSE FORMALITY REVIEW | J-       |        | 100 11 01    |
|                           |          |        | <del> </del> |

## INDEX OF CLAIMS

| ~ | Rejected                   | N | Non-elected  |
|---|----------------------------|---|--------------|
|   | Allowed                    | l | Interference |
| _ | (Through numeral) Canceled | Α | Appeal       |
| ÷ | Restricted                 | _ | Objected     |

|   | ς, ΄           |             |          |    |         |    |   | • | Ť        | •• | ••••    | ••• | ••••          | ••••      |           | •••• | •••• | ا              | Hes            | tr | ict | ed |               |              |   |
|---|----------------|-------------|----------|----|---------|----|---|---|----------|----|---------|-----|---------------|-----------|-----------|------|------|----------------|----------------|----|-----|----|---------------|--------------|---|
|   | Cla            | m           |          | ٠, |         | _  | _ | D | at       | е  |         |     |               |           |           | ]    |      | Cla            | aim            | Τ  |     |    | _             |              | - |
|   | Final          | C Doriginal | 47/16    | 1  | 10/2/12 | ,  |   |   |          |    |         |     |               |           |           |      |      | Final          | 19 Original    |    |     |    |               | -            |   |
|   |                | 2           | 1        | H  |         |    |   |   | 7        |    |         | t   | _             |           |           |      | ŀ    | _              | 52<br>53       | L  | #   |    | -             | +            | - |
| ŀ |                | 4           | #        | 1  | 7       | Ĩ  |   | F | +        |    | _       | +   | 7             |           |           |      | ŀ    |                | 54<br>55       | F  | +   | _  |               | +            |   |
|   |                | ļ           | Ŧ        | 7  | 1       |    |   |   | 1        |    | _       | F   | +             | 7         |           |      | ŀ    | 4              | 56<br>57       |    | 1   | ,  |               | †            |   |
| E | +              | 9           | F        | 1  |         |    |   |   | I        |    |         | F   | 7             | $\exists$ | $\exists$ |      | F    | _              | 58<br>59       |    | 1   |    | _             | 7            | _ |
| L |                | 7           |          | 1  |         |    |   |   | +        |    |         |     | $\frac{1}{1}$ | $\exists$ |           |      |      |                | 60<br>61       |    | ŀ   |    |               | 1            |   |
| L | 1 1 0          | 3           |          | #  | ļ       | 1  |   | _ | 1        | 1  | _       |     | #             | 1         |           |      | F    | 1              | 62<br>63       |    | +   |    | _             | 1            | - |
|   | 1              | 9           | H        | 1  | F       | 1  |   |   | t        | +  | -       | _   | +             | 1         |           | •    | F    | _(             | 84<br>85<br>86 |    | +   | 1  | _             | ‡            |   |
|   | 1              | 4           | <b>J</b> | 1  | 1       |    |   |   | t        | +  | 3.5     |     | +             | 1         | 7         |      |      | 6              | 37<br>38       |    | ļ   | 1  | _             | <del> </del> | - |
|   | 19             | _           | -        | •  | F       | +  | + |   |          | †  | 7       | -   | †             | 1         | ╡         |      | F    | E              | 9              | _  | ŀ   | †  | _             | F            | - |
|   | 22             |             |          |    | 1.0     | +  | 7 | _ | F        | +  | 7       | _   | +             | +         | 7         |      | F    | 7              | 1 2            | _  | -   | #  |               | F            |   |
|   | 23             |             |          |    |         |    | 1 |   |          | 7  | +       | _   | Ŧ             | 7         | 7         |      | F    | 7              | 3              | _  |     | +  | _             | F            |   |
|   | 26             |             |          |    |         | v. | 1 |   |          |    |         | _   | I             | Ī         | }         |      |      | 7              | 5<br>6         |    |     | I  |               |              |   |
|   | 27<br>28<br>29 |             | +        |    |         | -  | ‡ |   | <u>.</u> | +  | $\pm$   |     | L             | ŧ         | 1         |      |      | 7              | В              |    |     | 1  | 1             | E            | - |
|   | 30             | -           | +        | 1  | _       | t  | + | + |          | +  | ‡       | _   | -             | ‡         | 1         |      |      | 8<br>8         | 0              | -  |     | +  | 4             |              | - |
|   | 32             |             | +        |    |         | H  | + | 1 | _        | +  | +       | _   |               | ‡         |           |      |      | 8:             | 2              |    |     |    | 1             | 1            |   |
|   | 34<br>35       | F           | Ť        | +  | _       | F  | F | + |          | F  | #       | _   | F             | Ŧ         | -         |      |      | 84             | •              | #  |     | +  | +             | _            |   |
|   | 36<br>37       |             | L        |    |         |    |   | 7 | _        | F  | +       | _   | -             | ŀ         |           | ŀ    |      | 88             | 3              | 7  |     |    | †             | _            |   |
| Ć |                | ,           | F        | +  |         |    | L | 1 | _        |    | F       | 1   |               | Ŀ         |           |      | _    | 88             | 上              | I  | _   |    | 1             | _            |   |
| 4 | 40<br>41       |             | L        | +  |         |    | E | + | _        | L  | $\perp$ |     | _             |           |           | ŀ    |      | 90<br>91       | İ              | 1  |     | L  | $\frac{1}{1}$ |              |   |
| _ | 42<br>43<br>44 |             | F        | +  |         | ÷  | F | + | _        | L  | -       |     |               |           |           | F    |      | 92<br>93       |                | 1  |     | L  | Ŧ             | _            |   |
|   | 45<br>48       | •           | -        | +  | _       |    |   | ‡ |          |    | F       | 1   |               | F         |           | -    | _    | 94<br>95       |                | +  |     |    | +             |              | l |
| 7 | 47<br>48       | -           |          | ļ  |         |    | F | + |          |    | F       | +   | _             |           |           |      | _    | 96<br>97<br>98 | L              | -  | -   |    | †             | _            |   |
|   | 49<br>50       | _           |          | t  | 1       | _  |   | ŧ | 7        |    | F       | #   |               |           |           | F    |      | 99             |                | F  |     |    | t             |              | ŀ |

|   | CI       | alı      | n       | Γ   |      |   |   |   |   |    |   | 1 | Dε | ite | , |   |     |          |   | _ | _ |   |
|---|----------|----------|---------|-----|------|---|---|---|---|----|---|---|----|-----|---|---|-----|----------|---|---|---|---|
|   | Final    |          | Onginar | ,   |      |   |   |   | _ |    |   |   | ,  |     |   |   |     |          |   |   |   |   |
|   |          |          | 1       |     |      |   |   |   |   |    |   |   | _  | Ι   |   |   |     | Г        |   |   |   |   |
|   |          |          | 2       |     |      |   |   |   |   |    |   |   |    |     |   | - | . 1 |          |   |   | 7 |   |
| L |          | _        | 3       |     |      |   |   |   |   |    |   |   |    | Γ   |   | Γ |     | Г        |   |   | 1 |   |
| L |          |          | 4       |     |      |   |   | _ |   |    |   |   |    | L   |   |   |     |          |   |   | ] |   |
| L |          | _        | 5       | _   | 4    |   | 4 | _ | _ | L  |   | L |    | L   |   | L |     |          |   |   | I |   |
| L |          | 5        |         |     | 4    |   | 4 | _ |   | _  |   |   | _  | L   |   | L |     | L        |   | _ | 1 |   |
| L | _        | 5        |         |     | 4    |   | 1 |   | _ | _  | _ |   |    | L   |   | L |     |          | 1 |   | 1 | _ |
| ŀ | _        | 5        | -       | _   | 4    |   | 4 |   | 4 |    | 4 | _ | _  | L   | _ |   | _   | _        | 4 | _ | 4 |   |
| ŀ | _        | 5        | -       |     | 4    |   | 4 |   | 4 |    | 4 |   |    | L   |   |   | _   | _        | 4 |   | 1 | _ |
| ŀ | _        | 6        |         | _   | 4    | _ | 1 |   | 4 |    | 4 | _ | _  | L   | _ |   | 4   |          | 4 |   | ļ |   |
| Ł | _        |          |         |     | Ţ    | ` | 1 | _ | 4 |    | 1 | _ | 4  |     | 4 |   | 4   | Ĺ        | 1 | 1 | 1 |   |
| L | 4        | 62       |         | _   | +    |   | 4 |   | 1 |    | 4 |   | 4  | _   | 4 | • | 1   |          | 4 | _ | L | _ |
| L | 4        |          | _       | 2.0 | 4    |   | 1 | _ | 1 |    | 4 |   | 4  | _   | 4 |   | 4   |          | 1 | _ | Ļ | _ |
| H | _        | 64       | _       |     | 1    |   | 4 |   | + |    | 4 | _ | 4  | _   | 4 |   | 4   |          | 1 | _ | Ļ |   |
| H | _        | 65<br>66 | _       | _   | ł    | _ | ╀ | _ | ł | _  | 4 |   | 4  |     | 4 | _ | +   | _        | 4 | _ | Ļ |   |
| H | _        | 67       | _       | -   | ╁    |   | ŀ |   | Ļ |    | 4 |   | 4  | _   | 4 |   | 4   |          | ļ | _ | L |   |
| H | _        | 68       | -       | _   | ╀    |   | ╀ |   | ł |    | + | _ | +  | _   | + |   | +   |          | ╀ |   | H |   |
| H | -        | 69       | -       | _   | ╀    | _ | ╀ |   | ł | _  | + | _ | +  |     | 4 |   | +   | _        | ŀ |   | L | _ |
| - | -+       | 70       | -       | -   | ⊦    | - | H | _ | H | _  | + | _ | ╀  | _   | + | _ | ╀   | _        | Ł | _ | L | _ |
| _ | _        | _        | Ł       | _   | H    | _ | L | _ | L | _  | ╀ | _ | 1  | _   | 1 | _ | ╀   | <u>.</u> | L | _ | L | _ |
| H | _        | 71<br>72 | ┝       | _   | H    | _ | L |   | H | _  | + | _ | ł  | _   | + |   | l   |          | Ļ | 4 |   | _ |
| - |          | 73       | ⊦       |     | L    | - | H | _ | Ł |    | ╀ |   | +  | _   | ļ |   | ╀   | _        | L | - |   |   |
| - |          | 74       | ⊢       | -   | H    | - | H | - | H |    | ╀ |   | ╀  | _   | ╀ | _ | ŀ   | _        | L | 4 |   | _ |
| - | _        | 75       | ┝       | -   | H    | - | H | _ | H | -  | ┝ | _ | ł  | _   | ╀ |   | ╀   | _        | H | 4 | ć | _ |
| H | _        | 6        | ŀ       | 7   | H    | - | ۲ | - | H | -  | ╀ | _ | H  | _   | ł | _ | ⊦   | -        | H | - |   | - |
|   | _        | 7        | ┝       | _   | _    | 4 | _ | - | H |    | ۲ |   | H  |     | ╀ | _ | Ͱ   | -        | H | + |   |   |
| _ |          | 8        |         | 1   | _    | 1 | _ | 7 | H | -  | t |   | H  | -   | H |   | H   | 1        | _ | + |   |   |
|   | _        | 9        | Н       | 7   | - 11 | 1 | _ | 7 | - | -  | ۲ | - | H  |     | ۲ | _ | H   | ┪        |   | + | - | _ |
| ī | _        | Ö        | Н       | 1   |      | 1 | _ | 1 | _ | _  | t |   | H  |     | H |   | H   | ┪        | - | 1 | - | ٦ |
|   | E        | 11       |         | 1   |      | 7 |   | 1 |   |    | Т | _ | r  | _   | ı |   | Н   | 7        | _ | 7 |   | 1 |
| ī | 8        | 2        |         | 1   | ï    | 1 |   | 1 |   | ij |   |   |    |     |   |   | Ÿ   |          |   | t |   |   |
|   | 8        | 3        |         | I   |      | 1 |   | 7 |   | ٦  |   |   |    |     |   | ٦ |     | 7        | Ī | 1 | _ | 1 |
|   |          | 4        |         | 1   |      | I |   | Į |   |    |   |   |    |     |   | 7 |     | Ī        |   | Ţ |   | 1 |
|   |          | 5        | _       | 1   |      | _ |   | I |   |    |   |   |    |     |   | 7 |     |          |   | Ţ |   | 1 |
| _ | 8        | _1       | _       | 1   |      | 1 |   | 1 |   |    |   |   |    |     |   |   |     | 1        |   | I |   | ] |
| _ | 8        | _        | _       | ļ   |      | 1 |   | 1 |   | 4  |   | ┙ |    | _   |   | ╛ |     | 1        |   | Ţ |   | ] |
| _ | 8        | _        | _       | ļ   |      | 1 | _ | 1 | _ | 4  | _ | 4 | _  | 4   |   | 1 |     | 1        |   | 1 |   | 1 |
| _ | 8        | -        |         | ļ   |      | 1 | _ | ļ | _ | 4  | _ | 4 |    | 4   |   | 4 | _   | 4        |   | 1 |   | ľ |
| _ | 9        | _        | _       | Ļ   |      | ļ |   | Ĺ |   | 1  | _ | 4 | _  | 4   | _ | 1 |     | 1        |   | L |   | l |
|   | 9        |          | _       | L   |      | ļ | _ | L | _ | 1  | _ | 1 |    | 1   |   | 1 |     | 1        |   | L |   | l |
| _ | 92       | _        | _       | L   | _    | Ļ |   | L | _ | 1  |   | 1 | _  | 1   |   | 1 |     | Ţ        | _ | L | _ | 1 |
| _ | 93       |          | _       | L   |      | Ļ | _ | L | _ | ļ  |   | 1 |    | 1   |   | 1 |     | ļ        |   | L |   | 1 |
| _ | 94       |          |         | L   |      | L | _ | L | _ | 1  | _ | 1 |    | 1   | _ | 1 |     | 1        |   | L | _ | 1 |
| _ | 95       | -        | _       | L   |      | L | _ | L |   | ļ  |   | 1 | _  | 1   | _ | 1 | _   | 1        |   | L | _ | ļ |
| _ | 96       | -        | _       | L   |      | L |   | L | _ | ļ  |   | 1 | _  | 1   | _ | 1 | _   | Ļ        |   | Ļ | _ |   |
| 4 | 97<br>98 | _1_      | _       | L   |      | L | _ | ŀ | _ | 1  |   | 1 | _  | 1   |   | 4 |     | Ļ        | _ | L |   | l |
| - | 99       | _        | -       | H   | _    | ┞ | - | H | _ | ļ. |   | ļ | _  | 4   |   | 4 | _   | 1        |   | L | _ | ı |
| _ | 98       | 4        | _       | L   | _    | L |   | L |   | L  |   | L | _  | 1   | _ | 1 |     |          |   | L |   | ı |

| [ <u></u> |              | <u> </u> |   | _ | _ | _ |        | - |    | _  |        |   | _         | _ |   | _ |
|-----------|--------------|----------|---|---|---|---|--------|---|----|----|--------|---|-----------|---|---|---|
| Cla       |              | $\vdash$ |   | _ | _ | _ | _      | Ü | al | ıø | _      | _ | ,         | _ |   | _ |
| Final     | Original     |          |   |   |   |   |        |   |    |    |        |   |           |   |   |   |
| -         | 101          |          | H | † | _ | t |        | H | +  | -  | $^{+}$ | _ | ┝         | ┪ | - | t |
|           | 102          |          | Н | t |   | t | Т      | ┢ | 1  | _  | t      | _ | H         | + | _ | t |
|           | 103          | _        | Т | † | _ | † | ┪      | _ | †  | _  | t      | _ | H         | † | _ | t |
|           | 104          | •        |   | † |   | t |        | _ | †  | _  | t      |   | H         | † | _ | t |
|           | 105          |          |   | T |   | T | 7      | _ | 1  |    | T      |   | Г         | † |   | t |
|           | 106          |          |   | Ţ |   | Γ | 7      |   | 1  |    | T      |   | Г         | T |   | Γ |
|           | 107          | $\Box$   |   | Ι |   | Ĺ |        |   | I  |    | Ι      |   |           | T |   |   |
| _         | 108          | 4        |   | 1 | _ | L | _      |   | 1  |    | L      |   |           | I |   |   |
|           | 09           | 4        |   | 1 |   | L | 4      | _ | 1  |    | L      | Ц |           | 1 |   | L |
|           | 10           |          | _ | 1 | _ | L | 4      | _ | 1  |    | Ļ      | 4 | _         | 1 |   |   |
| _         | 11           | 4        |   | L |   | L | 4      |   | 1  | _  | L      | 4 |           | 1 |   |   |
|           | 12           | -        | _ | ╀ |   | L | 4      | _ | ╀  | _  | L      | 4 |           | ļ | 4 | _ |
| _         | 13           | -        | _ | Ł | _ | L | 4      | _ | ł  | _  | L      | 4 | _         | 4 | 4 | _ |
| <u>ا</u>  | 14<br>15     | +        |   | Ͱ | _ | _ | +      | _ | ╀  |    | ┞      | 4 | _         | ╀ | 4 | _ |
| ᆤ         | 16           | -        | _ | H | - | H | ╀      | _ | ╀  |    | H      | + | •         | ╀ | 4 | _ |
|           | 17           | +        |   | H | - | - | +      | _ | H  | _  | ┝      | + | _         | ╁ | + | _ |
| _         | 18           | +        | _ | H | ٦ | _ | $^{+}$ | _ | ۲  | _  | H      | + | _         | ┝ | 1 | _ |
|           | 19           | +        | _ | H | ┪ | _ | t      | _ | H  | -  | H      | t | -         | ┝ | + | - |
| _         | 20           | +        | _ | ┝ | 1 | - | t      | - | ۲  | ┪  | _      | + | _         | ┝ | + | - |
| _         | 21           | +        | - | ⊢ | ┪ |   | t      | - | H  | -  | _      | + | _         | ┝ | + | - |
|           | 2            | +        | _ | Н | 7 | _ | t      |   | H  | -  |        | + | _         | ┝ | + | - |
|           | 2            | +        | _ | ÷ | 1 |   | ۲      |   | H  | ┨  | _      | t |           | ┝ | + | - |
|           | 24           | +        | ╛ |   | † |   | t      | ` | H  | 1  | _      | t |           | - | + | - |
| _         | 5            | +        | ┪ |   | Ť | _ | -      |   |    | 7  |        | t | _         | - | t |   |
| 12        |              | T        | 7 |   | 1 | _ | T      |   |    | 1  |        | t |           | Т | t | _ |
| 12        |              | T        |   |   | 1 |   | Τ      | ╛ |    | 1  |        | t |           | - | t |   |
| 12        | 8            | Ŀ        |   |   | I |   |        |   |    | I  |        | T |           |   | Ī |   |
| 12        |              | ┸        |   |   | 1 |   |        |   |    |    |        |   |           |   | ŀ |   |
| 13        |              | ┸        | 4 |   | l |   |        | ┛ |    | _  |        | L |           |   | L | į |
| 13        |              | ╀        | 4 | _ | 1 |   | L      | 4 |    | 1  |        | L | ┙         |   | L | : |
| 13        | _            | +        | 4 |   | 4 | _ | L      | 4 |    | 4  |        | L | 4         | _ | L | _ |
| 13        |              | ╀        | 4 | _ | + | _ | L      | 4 |    | 4  | _      | L | 4         | _ | L | _ |
| 13        |              | ╄        | + | _ | ╀ |   | L      | + | _  | +  |        | Ł | 4         | _ | Ļ | _ |
| 13        | <del>-</del> |          | + |   | t | _ | _      | + | _  | +  |        | H | +         | _ | ŀ | 2 |
| 13        |              | ╁        | + | - | ۲ | 7 | H      | + | _  | +  |        | H | +         | - | ┞ |   |
| 131       |              | t        | t | _ | t | ┪ |        | t | _  | +  | _      | H | +         | _ | H |   |
| 139       |              | t        | t | _ | t | 1 | _      | t |    | +  |        | H | +         | - | H | 0 |
| 140       |              | T        | T |   | T | 7 |        | 1 | _  | t  | _      |   | †         | _ | - | - |
| 14        |              | 1        | t |   | t | 1 | -      | t | -  | t  | _      | ┝ | t         | - | Н | - |
| 14        |              | T        | t | - | ۲ | 1 | _      | † | Ť  | t  | 7      | _ | +         | - | - | - |
| 143       | _            |          | t |   | r | 1 |        | t |    | 1  | -      | - | +         | ٦ | - |   |
| 144       | -            |          | Ť |   |   | 7 | _      | Ť | _  | t  | ٦      | _ | $\dagger$ | - | - | 1 |
| 145       |              | Г        | t |   | T | 7 |        | t |    | t  | 7      | - | †         | 1 |   | 1 |
| 146       |              |          | I |   |   | 1 |        | 1 |    | 1  |        |   | 1         | 1 | - | 1 |
| 147       | 1            |          | Ī |   |   | 1 |        | T |    | T  | 7      |   | T         | 7 | _ | 1 |
| 148       |              |          | Γ |   |   | 1 | _      | Ī | _  | T  | _      | _ | Ť         | 1 |   | 1 |
| 148       | Γ            |          | I |   |   | I | _      |   |    | Γ  |        |   | Ι         | ] |   | 1 |
| 150       |              |          | Ĺ |   |   | T | _      | Γ | _  | Γ  | T      |   | Т         | 7 | Ī | 1 |

If more than 150 claims or 10 actions staple additional sheet here

(LEFT INSIDE)

